

PHENIX WEEKLY PLANNING



8/13/2009
Don Lynch

Task

Start Date End Date

• Presurvey $\frac{1}{2}$ octants at RPC Factory	Done	Done
• cleaning and testing of MuTracker HV splitter boxes	Done	Done
• Install MuTrigger Station 1 S FEE cable management	Done	Done
• Receive and test MuTrigger FEE's	Done	Done
• Move PHENIX-North tunnel shielding, remove PHENIX-North vapor barrier and crystal palace, repair/replace area lighting	Done	Done
• Tear down and remove PHENIX "stage" for Summer Sunday Tour	Done	Done
• Replace hoses under EC	Done	Done
• Move MuID piping, piping supports out of Gap 5 to temporary store area	in progress	8/14
• Move MuID cables and cable tray out of Gap 5 to temporary store area	in progress	8/14
• Install ladder/access platform and work platforms for work above MuID steel (3 days)	in Progress	8/14
• ID/label gap 5 N cables & pipes and move out of gap 5	in Progress	8/14
• Install MMS station 2/3 scaffolding	in Progress	8/14
• Move electrical boxes under EC	in progress	8/21
• Test and commission RPC3N lifting fixtures at factory with S. Kane/designee as witness	in progress	8/21
• Install Station 1 FEE's & Electronics and connect cables	in progress	8/28



Next Week 8/17-8/21

Task

Start Date End Date

- Survey tapped holes on MuID5 steel and survey east and west RPC3 N support bases (3 days) 8/17 8/21
- Drill and tap MuID gap 5 steel top and north 8/17 8/21
- Install RPC3 N support base & grout (4 days) 8/17 9/1
- Install Station 3 N pitch control (unistrut rails) on pedestal and east and west gap 5 north walls and attach to support bases (tall column) 8/17 9/1
- MuTr decapacitations & MuTr FEE trouble-Shooting in MMS Sta 1&3 8/17 8/28
- MuTr Rack 2 troubleshooting 8/17 8/28
- MuTr HV and FEE test and evaluation as MuTrigger FEE's & RPC's are installed 8/17 11/30
- Test base RPC3 N locking/installation fixture 8/17 8/21
- Erect PC1 repair tool 8/17 8/21
- Assemble HV, experimental gas and N2 gas distribution and install tent in progress 8/28
- Fabricate Base Locking/Installation fixture in progress 8/28
- Fabricate RPC3 adjustable $\frac{1}{2}$ octant cradle in progress 8/28



Next Week 8/17-8/21

Task

Start Date End Date

- Order & receive parts for gap5 N cable management in progress 8/14
- Prep RPC3 N racks for installation in progress 8/28
- MuTr Group wants Ar/CO2 for Aug 17-28 8/14 8/14
- Move MuID plumbing rack on pedestal away From gap 5 in Progress 8/21
- Evaluate Gap 5 grout at Factory in progress 8/21
- Disassemble DC/P C1 cables & piping 8/17 8/28
- Install Station 1 MuTrigger FEE air & water and test 8/17 9/11
- Install new gap5 N cable & pipe supports, cables and piping and leak test piping 8/17 9/30
- Begin removing HBD east for rework at Stony Brook 8/17 8/25
(ship out of IR on 8/21)



8/13/2009

POWER SHUT DOWN NOTICE

1. Substation 8B

Date: 8/19 and 8/20 Starting Time: 1300, 8/19 Wednesday

Power restores at: 1600, 8/20 Thursday

- System affected: 1008C motor control center, PHENIX MMPS at 1008B mezzanine and PHENIX IR air conditioning.
- Circuit 8B44, Line crews disconnect and remove three 500 kcmil cables feeding PHENIX A/C unit 400A switch. 8/19 afternoon.
- Line crews perform maintenance on 8B substation 13.8 kV air switch and 480V switchgear.
- C-AD electrician will perform maintenance on 1008C PHENIX motor control center and PHENIX MMPS disconnect switches.
- C-AD electrician will tie in circulating water pump to MCC at 1008C.

2. Substation 6A, 8A and 10A

Date: 8/20, Thursday Time: 900~1600

Building affected: Normal power at alcove 5C, 7A, 7B, 7C, 9A, 9B, 9C, 11A and 11B. Normal power at Service building 1006A, 1006B, 1007W, 1008A, 1008B, 1010A. Trailers at 1006, 1008 and 1010A.

- Line crews will perform maintenance on 13.8 kV air switches and jumper cables. Visually inspect the 480V breakers and cable compartment.
- C-AD electrician will perform wiring change and tie-in at building 1008B Main panelboard for the new 1008B building air conditioning and reroute PHENIX IR air conditioning power source to substation 8A.
- Automatic Transfer Switch tests at 6A, 8A and 10A will be performed.
- C-AD electricians will inspect the 8S main panelboard and 8A motor control center. These are the new equipment installed last year.
- C-AD electrician will replace the circuit #4 200A switch bucket on panelboard 6H at 1006.
- Normal/emergency power at 6A, 8A, 10A substation region will be available.

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Please contact P.K. Feng at x 5648 for questions.

Continuing Tasks currently underway (cont'd)

Task	Start Date	End Date
• Simulated RPC installation at RPC Factory (practice/tests) commission all installation components base, locking/install, survey, cradle	in progress	8/31
• Troubleshoot MUTrigger FEE's in MMN	in Progress	8/31
• Troubleshoot MUTr decaps in MMN	in Progress	8/31
• Plan and install 2 new PHENIX gas pad expansion pads	in progress	9/4
• Spec, purchase, install and test instrumentation and monitoring, cables, etc.for rack room AC3 and new electronics water chiller	in progress	10/31
• Spec, purchase, install and test instrumentation and monitoring, cables, etc.for non-PHENIX fire alarm status panel	in progress	10/31
• Spec, purchase, install and test power wiring for new DCM racks	in progress	10/31
• Start Design supports for Beampipe upgrade	in progress	11/30
• Design & Fabrication support for VTX	in progress	11/30
• Design support for FVTX	in progress	11/30
• Design support for FOCaI	in progress	11/30
• Fan Tray replacements (as time permits)	in progress	11/30

Continuing Tasks currently underway (cont'd)

Task	Start Date	End Date
• Test/replace rack transient suppression	7/20	12/1
• UPS feeds for GTM and GL1 racks	7/20	12/1
• Cordless phones in tunnel	7/20	12/1
• Individual relays on all HV supplies	7/20	12/1
• SF6 alarm to MCR?	7/20	12/1
• More volts to EMCAL FEM's?	7/20	12/1
• Revisit LV systemization/standardization of controls, etc.	7/20	12/1
• Correct wiring of the DCM crates enables	7/20	12/1
• Replace ECB1&2 (ADAM5000s) with a single new ADAM5000E	7/20	12/1
• Replacement OPC server computers	7/20	12/1
• Replace old PCI type RS485 interface boards with USB-Fiber and Fiber-RS485 system	7/20	12/1
• Add single-button ON/OFF controls to some LV GUIs	7/20	12/1
• Determine optimal baud rate for EC North RMC	7/20	12/1
• Remove the temporary FlatPAC in SMT4 and install two new MegaPACs	7/20	12/1

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Continuing Tasks currently underway (cont'd)

Task	Start Date	End Date
• VTX/FVTX LV Dist system evaluation	7/20	12/1
• Prep for production of up to 39 boards in 4 crates (VTX/FVTX)	7/20	12/1
• VTX/FVTX cooling system interlock design	7/20	12/1
• Evaluate possible design for 4x1 GL1 L1 triggers	7/20	12/1
• Test direct ethernet implementaion on Maszi's new HV control interface board	7/20	12/1
• Get air conditioners installed in mixing house	7/20	12/1
• Investigate shed/larger bottles for R134A	7/20	12/1
• Replace damaged compressed air flowmeter	7/20	12/1
• Add check valves to some supply lines (as needed)	7/20	12/1
• Design and build heat exchanger for HBD system	7/20	12/1
• Re-test HBD supply line for leaks (pad to mixing house)	7/20	12/1
• Replace/ regenerate HBD purifier and driers (late Fall)	7/20	12/1
• Send mass flowmeters out for recalibration (DC/PC, MuID, TOF.W)	7/20	12/1
• Replace pad chamber flowmeters in IR, re-label	7/20	12/1
• Investigate Mutr station 2 gas loss. Confirm labeling	7/20	12/1
• Replace/upgrade gas house PC's	7/20	12/1
• Move MuID distribution panel, for future RPC access	7/20	12/1
• Re-route several gas lines in the RPC3 south gap	7/20	12/1

Continuing Tasks currently underway (cont'd)

Task	Start Date	End Date
• Install LV Dist modules in MuTrigger S.	7/20	12/1
• Remove temporary MegaPAC in sRPC1 rack and install new full MegaPAC and finish controls for it	7/20	12/1
• Run gas lines to North tunnel	7/20	12/1
• Design and build gas humidifier	7/20	12/1
• Layout and build North distribution panel	7/20	12/1
• Run Signal/control lines to north tunnel (line goes to IR panel first)	7/20	12/1
• Build RPC gas rack for mixing house	7/20	12/1
• Install electronic and Gas PC in gas house for RPC's	7/20	12/1





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Expected IR Configuration During Shutdown '09

- Now-10/1 MMS south, CM in run position, EC in AH
WC in west position (against wall), scaffolding
in station 1 and station 2/3 south
- 9/25-11/10 MMS, CM & WC positions TBD, EC in AH
- 11/10-12/1 MMS & CM in run position, EC and WC can be
moved east west ~3 ft

These dates are approximate and subject to change

TECHNICAL SUPPORT NOON

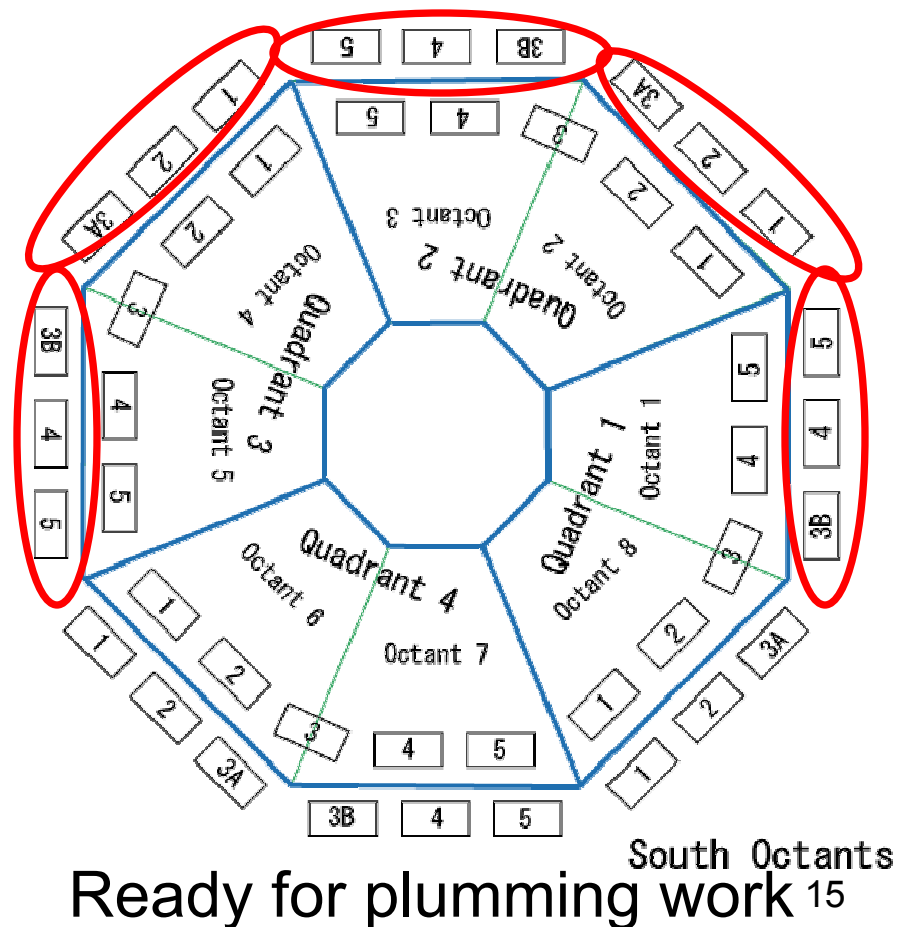
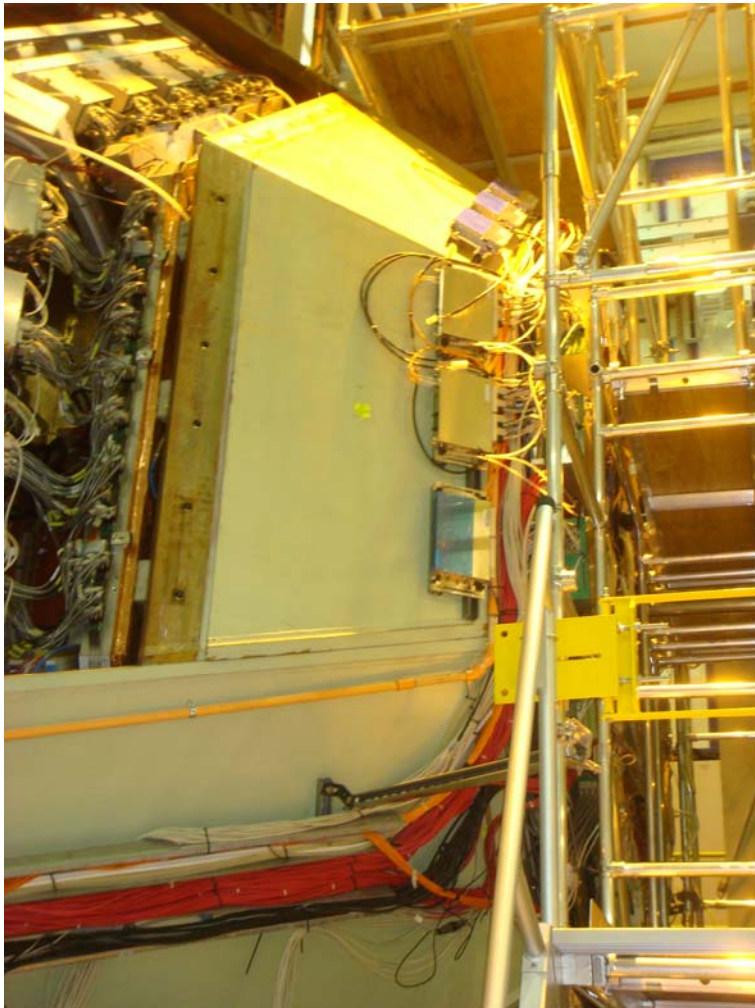
MuTRG-FEE Installation Status

RIKEN/RBRC

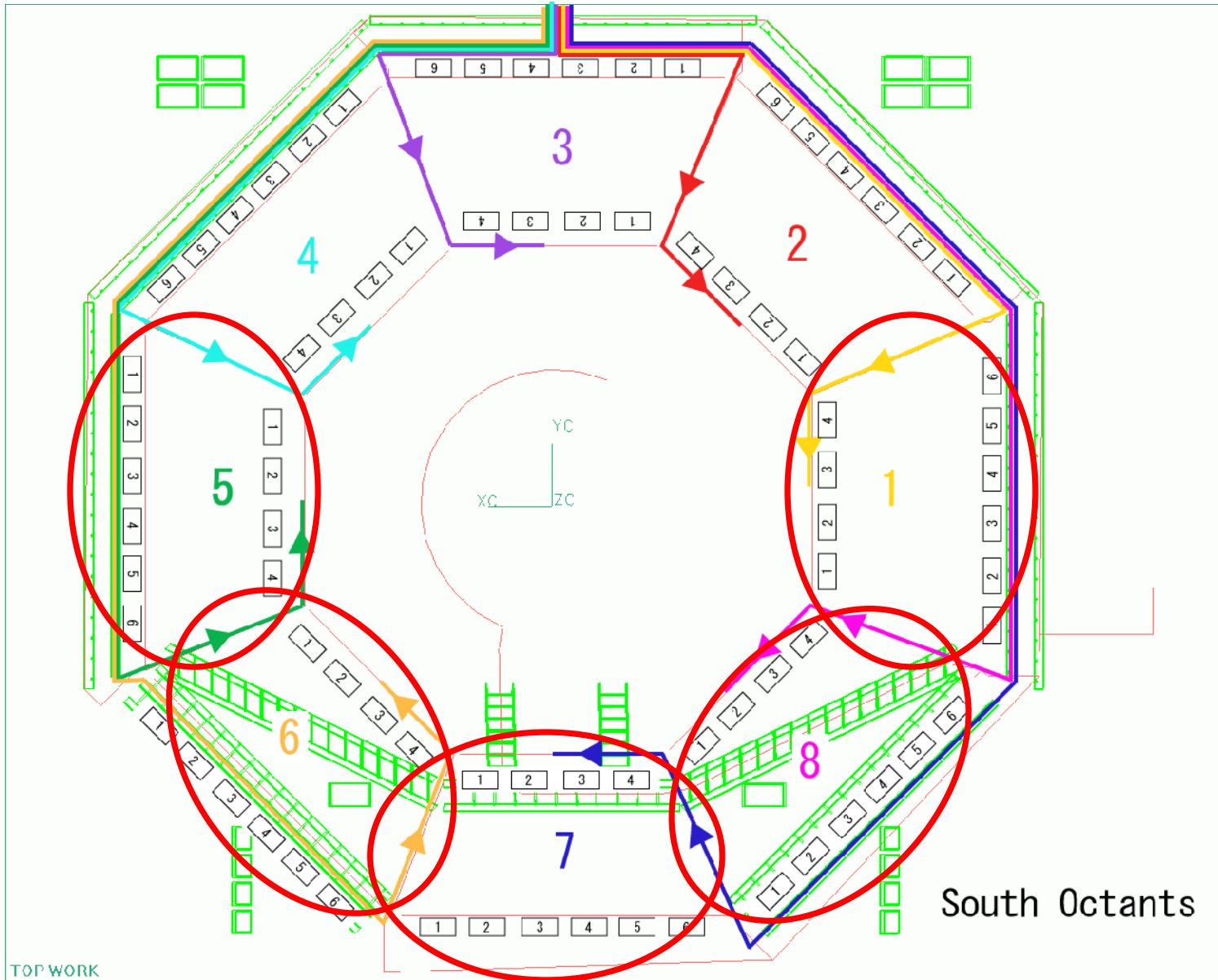
Itaru Nakagawa

Station-1 Chassis Mount

Chassis are mounted



Station-2&3 Chassis Mount



Station-1 Cabling

Ran St-1 LV&Fiber Cables



LV cables can be cut/connected to terminal blocks in LV rack

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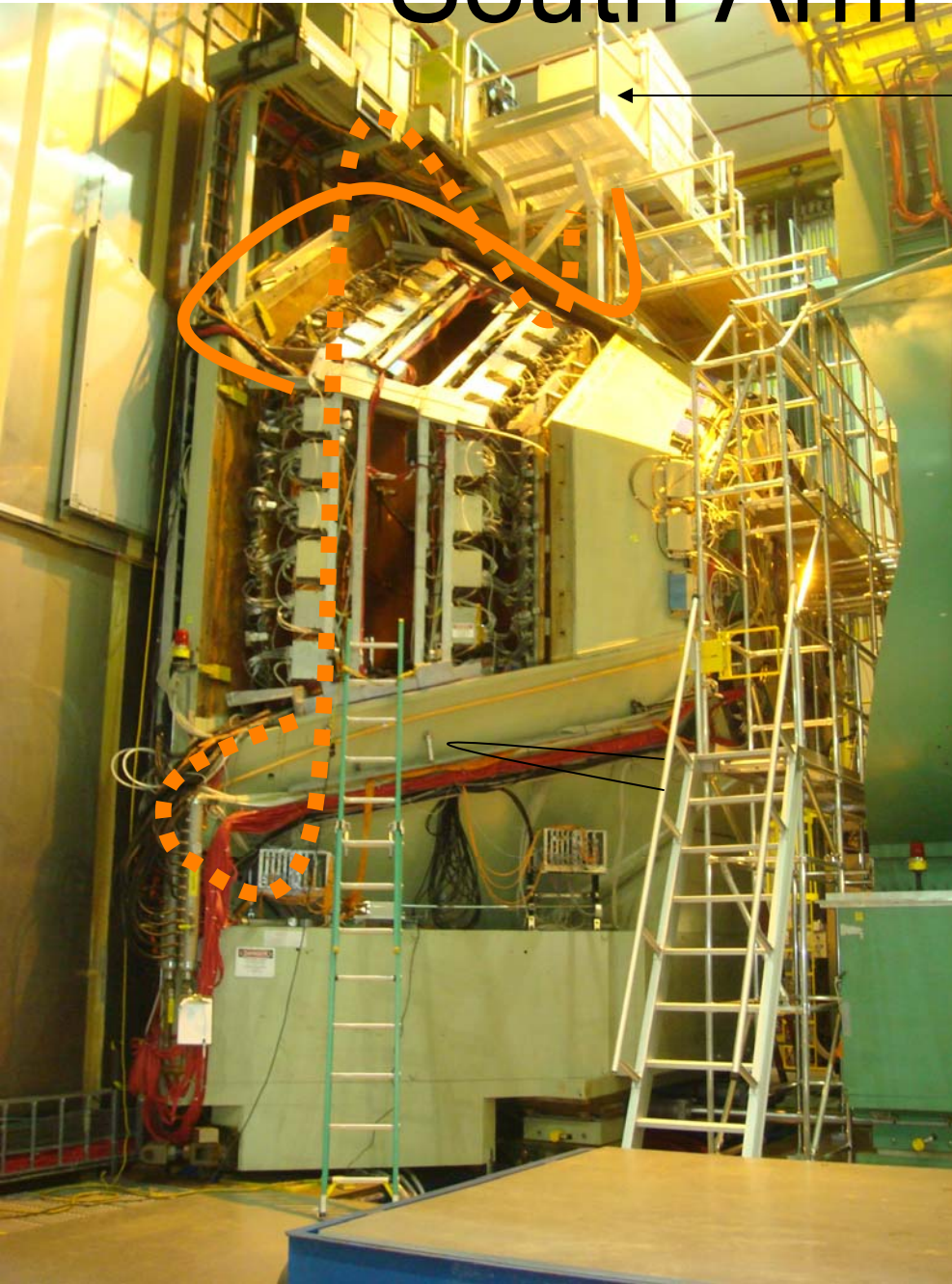
Plan after Scaffold Construction

1. Run St.2&3 Cables to Platform (may need man lift)
2. LV cable cut/connection to terminal blocks (Frank)
3. Trunk Cable connection to MuTRG rack (MuTRG group)

1. St.2&3 Chassis Mount (MuTRG group)
2. Plumbing (John T., Mike L.)

South Arm Installation

MuTRG-FEE Racks



1. Man lift?
2. West cable tray?

Rest of August Schedule

Task

Start Date End Date

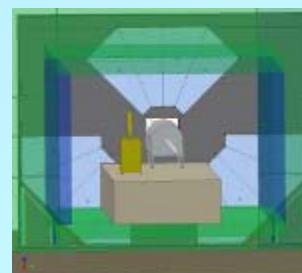
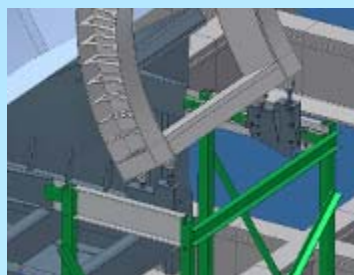
- Move DC on EC to access PC1 east
- Install MuTrigger FEE station 2/3 FEE's & Electronics & connect cables
-

8/31

9/4

8/31

9/25



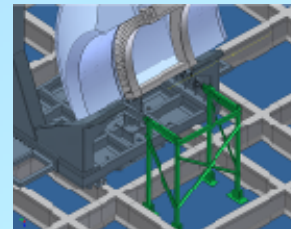
September Schedule

PHENIX

Task

Start Date End Date

- Final leak test new Ar dewar/vaporizer and Closeout job
- Install Empties racks on gas pad
- Install RPC3 N $\frac{1}{2}$ Octants (16 days)
- Vendor install Ar dewar & vaporizer
- Install rails and fences on gas pad
- DCM rack electric prep
- First $\frac{1}{2}$ octant ready for installation
- Close MMN Hatch and closeout WP
- Rack room re-organization
- CM Power upgrade (as toime permits)
- Labor Day Holiday - no work
- Remove failed PC1 east module
- Install spare PC1 east module
- Install 2 RPC3 N racks (1/2 day)
- Test PC1 spare and verify operation
- Install MuTrigger FEE station 2/3 air & water plumbing and test
- Move DC on EC back to normal position
- Reconnect cables and piping on DC and PC1 East
- Remove station 1 south scaffolding
- Install rack components in RPC3 N racks
- Final verification tests on PC1 east repair



8/28	9/4
8/31	9/4
9/1	9/30
9/1	10/15
9/1	10/15
9/1	12/1
9/1	9/1
9/1	9/1
9/1	11/30
9/1	11/30
9/7	9/7
9/10	9/14
9/10	9/14
9/8	9/18
9/14	9/17
9/14	10/9
9/18	9/18
9/21	9/25
9/21	9/25
9/21	9/30
9/28	9/30

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October Schedule

Task

Start Date End Date

- Disassemble and store PC1 east repair fixture 10/1 10/2
- Attach cables to RPC3 N racks and to Detector $\frac{1}{2}$ octants 10/1 10/9
- Install new PHENIX north tunnel thermal/vapor barrier replacing crystal palace (1 week) 10/1 10/30
- DCM rack supply& Return plumbing 10/5 10/16
- Remove MMS Sta 2/3 scaffolding 10/12 10/23
- Commission RPC3 N racks and detectors 10/12 10/30
- DCM rack internal plumbing 10/19 10/30
- Reinstall MMS lampshades (2 days) 10/26 10/30



November Schedule

Task

Start Date

End Date

TECHNICAL SUPPORT ROOM

- Install heaters and thermostat(s) for RPC3N thermal control 11/2 11/6
- Reinstall PHENIX North tunnel shielding (3 days) 11/2 11/6
- Cooldown for Run 10 Starts 11/7 11/7
- Move MuID Collars to IR 11/7 11/7
- Disconnect electric & Fiber in EC 11/2 11/7
- Remove ladder & dumb waiter from EC & Fold up EC platforms in AH (1 day) 11/9 11/10
- Veterans Day Holiday - no work 11/11 11/11
- Remove IR Floor plates and move 12 ton cart to AH 11/12 11/12
- Move EC to IR 11/12 11/13
- Reconnect electric and fiber to EC 11/16 11/20
- Reinstall ladder & dumb waiter on EC & Fold down EC platforms in IR (1 day) 11/16 11/20
- Pink sheets, white sheets, blue sheets 11/16 12/1
- Move MMS north, Install MuID Collars 11/23 11/25
- Assemble shield wall base and wall in AH 11/23 11/30
- Thanksgiving Holiday - no work 11/26 11/27
- Roll in shield wall 11/30 11/30
- Start Run 10, All shutdown activities completed 12/1 12/1

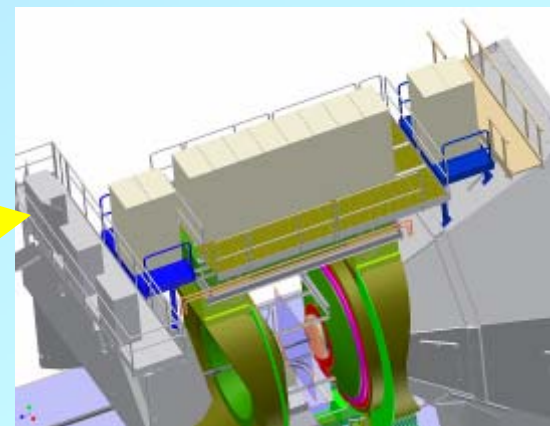


Other potential work this shutdown:

1. Remove the RPC prototype absorber

Confirmed: this to be done while
Station 1 scaffolding is in place

2. Prep Bridge for future upgrades
(if time permits)



More work to be scheduled

Purchase and install 2 AC's in
Phenix Gas Mixing House

Suggested model ;

Mcmaster part number: 1817K89
19.5 K btu

Per R. Pisani



2009 Building Maintenance Issues

- Roof leaks in utility bathroom at northwest corner behind tech offices and over door between rack room and assembly hall.
- Heat wrap tape for trailer bathroom toilet drains to prevent freeze/clogging in winter.
- Improved Rack Room AC performance (This item has been addressed time and again but unsatisfactorily. Currently the AC fails periodically and is repaired only to fail again. On-condition maintenance is not adequate...an engineered solution is needed.)
- Icy conditions at mixing house north stairs
- Mixing House loose board ?



1. ODH medical monitoring no longer required. No ODH monitoring in tunnel for RPC3 work until start of run unless otherwise notified. Check and abide by postings when entering tunnel
2. Make sure you read and sign work permits. (PDF) Copies of work permits are available on-line in the PHENIX engineering web site. (follow link to work permits for 2009 shutdown.)
3. (PDF) copies of procedures referenced in work permits are posted on-line in the PHRNIX engineering web site (follow link to procedures for 2009 shutdown.) .
4. Procedure reviews continuing Don, Paul and Rob are reviewing all procedures for accuracy and need. Web site with PDF's of all procedures will be linked to the PHENIX engineering website in the next few months.

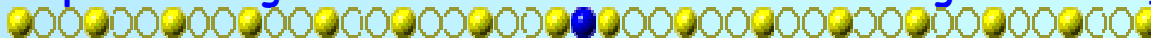
Where To Find PHENIX Engineering Info

Summer Sunday 2009



Links for the weekly planning meeting slides, archives of past meeting slides, long term planning, pictures, videos and other technical info can be found on the PHENIX Engineering web site:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm



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